

**BEST AVAILABLE COPY**

Patent Docket No. 54008.8080.US00  
P01-0007

In the Claims:

Please amend claim 1 and cancel claims 29-32. A complete set of claims, as amended, is attached.

COMPLETE SET OF PENDING CLAIMS:

1. (Currently Amended) An apparatus for processing a workpiece comprising:
  - a liquid supply source;
  - one or more liquid outlets disposed to apply a layer of liquid onto the workpiece;
  - a liquid flow line extending between the liquid supply source and the one or more liquid outlets for carrying liquid to the liquid outlets;
  - at least one heater for heating the liquid before it is applied onto the workpiece;
  - an ozone gas supply system which provides ozone gas around the workpiece while the layer of heated liquid is on the workpiece; and
  - a sonic energy source associated with the liquid outlets for introducing sonic energy to the workpiece through the layer of liquid on the workpiece.
- 2-3. (Cancelled).
4. (Previously presented) The apparatus of claim 1 wherein the sonic energy source is associated with the liquid outlets, to provide sonic energy to the workpiece via liquid moving out of the outlets and onto the workpiece.
5. (Original) The apparatus of claim 1 wherein the sonic energy source comprises a sonic transducer including a focusing chamber for concentrating sonic energy onto the workpiece.
6. (Original) The apparatus of claim 1 where the liquid supply source comprises a liquid reservoir, and where the heater heats the liquid in the reservoir.

7. (Original) The apparatus of claim 1 where the liquid supply source includes a liquid selected from the group consisting of, ammonium hydroxide, sulfuric acid, hydrochloric acid, hydrofluoric acid, a surfactant, de-ionized water, and a combination thereof.

8. (Original) The apparatus of claim 1 further comprising a chamber around the workpiece and with the ozone gas supply connected to the chamber to provide ozone gas around the workpiece in the chamber, with the ozone provided as a dry gas or in a liquid.

9. (Original) The apparatus of claim 8 further comprising a re-circulation liquid line extending between the chamber and the liquid supply source.

10. (Original) The apparatus of claim 8 further comprising a rotor assembly in the chamber for rotating the workpiece.

11. (Original) The apparatus of claim 1 where the liquid outlets comprise liquid nozzles for spraying the heated liquid onto the workpiece.

12. (Original) The apparatus of claim 1 further including means for controlling the thickness of a layer of the liquid formed on the surface of the workpiece.

13. (Original) The apparatus of claim 12 where the means for controlling comprises a liquid flow control system for controlling the flow of liquid onto the workpiece.

14. (Original) The apparatus of claim 13 where the liquid flow control system includes spray nozzles.

15. (Original) The apparatus of claim 12 where the means for controlling comprises a rotor for holding and rotating the workpiece.

16. (Original)) An apparatus for treating the surface of a workpiece comprising:

- a liquid reservoir for holding a process liquid;
- a process chamber;
- a workpiece holder within the process chamber;
- liquid spray nozzles within the process chamber disposed to spray liquid onto the workpiece held by the workpiece holder;
- a liquid flow line extending between the liquid reservoir and the liquid spray nozzles;
- an ozone generator for generating a supply of ozone;
- one or more ozone supply lines extending from the ozone generator to the process chamber;
- at least one heater for heating the process liquid; and
- a sonic energy source on the workpiece holder for introducing sonic energy to the workpiece.

17. (Previously Presented) The apparatus of claim 16 where the workpiece support holds the workpiece in a horizontal orientation.

18. (Previously Presented) The apparatus of claim 16 further comprising a valve connecting to a spent liquid line extending from the process chamber, to the liquid reservoir, and to a drain, with the valve switchable between a first position, wherein spent liquid from the process chamber is directed back to the reservoir, and a second position, wherein spent liquid from the process chamber is directed to the drain.

19 – 32. (Cancelled)

**This Page is Inserted by IFW Indexing and Scanning  
Operations and is not part of the Official Record**

**BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ BLACK BORDERS
- ☐ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
- ☐ FADED TEXT OR DRAWING
- ☐ BLURRED OR ILLEGIBLE TEXT OR DRAWING
- ☐ SKEWED/SLANTED IMAGES
- ☐ COLOR OR BLACK AND WHITE PHOTOGRAPHS
- ☐ GRAY SCALE DOCUMENTS
- ☒ LINES OR MARKS ON ORIGINAL DOCUMENT
- ☐ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY
- ☐ OTHER: \_\_\_\_\_

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.**